





With the recent merger of Edwards and Kelcey, Inc. and Carter and Burgess, Inc. into the Jacobs organization, we bring national credentials in transit, railroad, and project management services. Through these mergers, we have further strengthened a team that includes transit and PMO-experienced professionals. We offer comprehensive planning, design, program, and construction services for a wide range of infrastructure projects. While the following list of services is not all inclusive, it demonstrates our depth of in-house capabilities associated with the transit industry. Our team blends the engineering and construction experience to bring added value to your mission of delivering quality projects on time and on budget.

- Civil and structural engineering
- Trackway engineering
- Station design
- Tunnel and underground structures Communication engineering
- Architectural design
- Facilities electrical and mechanical engineering
- Utility relocation
- Landscaping
- ADA compliance
- Federal grant management process, compliance and regulatory
- Public involvement and stakeholder facilitation

- NEPA process
- Traction power engineering
- Signals engineering
- Train control
- · Systems engineering and integration management
- Vehicle engineering
- Data acquisition systems
- Project and program management
- Project and program controls
- Cost estimating
- Schedulina
- · Risk assessment

- Operations planning
- Operations management
- Transit capacity analysis
- Start-up of revenue operations
- Economic analysis
- Funding and cost analysis
- Construction management
- Construction inspection
- Surveying
- Safety and security analysis
- Design validation
- Quality assurance/Quality control
- Value engineering
- Constructability/Bidability

FTA PMO Experience Highlights

Since 1993 we have executed Program Management Oversight Contractor (PMOC) assignments that have consistently received high ratings from your regional and headquarters staff. We understand your expectations and work processes, and we have proactively supported your goals. We have proven our capability to transition into a region where oversight work is under way and have provided oversight products on time and within budget. We have met the challenges of advancing technology, increasingly complex environmental restrictions, public scrutiny, and multiple project delivery methods in evaluating the various grantee's technical capacity and capability. The following highlights the combined PMO experience of Jacobs and Carter and Burgess.



State Street Station



Station Entry



Access to Station

Chicago. From 1994 to 2007, we provided PMO services for projects executed by the City of Chicago Department of Transportation (CDOT), Metra Commuter Rail (Metra), and the Chicago Transit Authority (CTA).

- CDOT We provided oversight for the State Street Subway Renovation Program, Dearborn Street Subway Renovation, and rehabilitation of stations along the CTA Loop.
- Metra We provided oversight for three New Starts projects that were all completed within budget and ahead of schedule. They included the North Central Service Expansion, Southwest Service Extension and Expansion, and the Union Pacific West Line Extension.
- CTA We monitored several major capital projects including the Green Line Rehabilitation, Douglas Branch New Starts, Ravenswood (Brown) Line, and Rail Car Procurement Program.

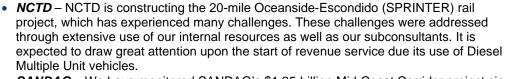
San Diego. We have provided oversight of the San Diego Region's major transit agencies since 2001. These include the Metropolitan Transit Development Board (MTDB), North County Transit District (NCTD), and the San Diego Association of Governments (SANDAG)

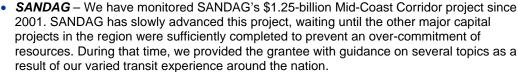
MTDB - MTDB's \$500-million Mission Valley East Light Rail Transit extension project was in the construction phase when we assumed oversight duties. This 5.9-mile project included construction along the congested I-5 freeway and through the center of the San Diego State University campus. The project was completed 6 months ahead of schedule and has exceeded earlier ridership projections.

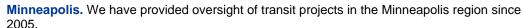




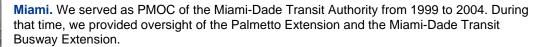
SDSU Underground Station



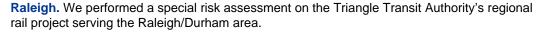




- Northstar Commuter Rail We are providing oversight of the Minnesota Department of Transportation's (Mn/DOT) \$318-million, 40-mile commuter rail project. We supported the FTA in preparing the FFGA that was executed December 2007.
- **Central Corridor Light Rail Transit** We began oversight of the proposed 11-mile, \$990-million project in 2006. The project is now in the preliminary engineering phase.

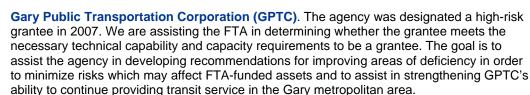


Charlotte. We provided oversight and risk assessment services for the Charlotte Area Transit Systems South Corridor Light Rail Transit project from 2000 to 2004.



Baltimore. We initiated our PMOC services for the Baltimore Central Light Rail line turnkey demonstration project in 1993.

- MTA We monitored and reported on progress of procurement of 50 tri-level heavy rail
 coaches. We reviewed production and quality control processes, monitored cost and
 schedule, reviewed technical design, and evaluated reliability reporting system.
- MARC We monitored project progress of service extension to Frederick. We participated
 in planning operational start-up and attended safety certification meetings.



Phoenix. We provided PMO services to Region 9 for the \$1.3-billion Valley Metro Rail light rail extension program from late 2003 through 2006. The program included all PMO services for the 20-mile system that included stations and maintenance facility.

Philadelphia.

SEPTA – We provided PMO services for Region 3 from 1998 through mid 2006. Facilities included the aerial guideway and station replacement for West Market Street Elevated automatic train control project, Frankford Terminal, and shops and yard modernization.



Lower Manhattan Recovery Office (LMRO) – We are providing the following services for LMRO on the World Trade
Center Port Authority Trans-Hudson (PATH) Terminal project: implementation plans and contractor transitions,
technical review of grantee's technical capacity and capability, monitoring budget, schedule and quality, lessons
learned and monthly monitoring reports, Spot Reports, risk assessment, and Quality Management Plan.



NCTD Sprinter DMU



Baltimore Central LRT



MTA's Heavy Rail Service



SEPTA – Philadelphia



World Trade Center station

0712-STL-P0151 3 **JACOBS**



Programmatic. We have provided specialized services to the FTA under Programmatic Task Orders since 2005. Areas of assistance include real estate, risk assessment, and technical input on various guidance documents including the PMO Final Rule and PMOC Operating Procedures. Under this task we developed "rightsizing" guidelines for light rail vehicle maintenance facilities.

Transit Experience Highlights

Our range of transit experience allows us to provide a thorough, comprehensive evaluation of any transit system, anywhere in the nation, quickly and accurately. The following project briefs demonstrate the depth of our combined Jacobs, Carter & Burgess, and Edwards and Kelcey experience to deliver your PMO services.



MetroLink Light Rail, St. Louis, MO

Starter System - Lead consultant and program manager for the award-winning initial 18-mile-long starter system.

St. Clair County, Illinois Extension - Preliminary and final design through construction for facilities, bridges, and stations for the 26-mile extension including 11 new stations.

Cross County MetroLink Segment 1 Extension - Joint venture partner, teamed to provide program management consulting services for adding nearly 8 miles of new track and nine stations.



Old Colony Railroad Rehabilitation, Southeastern MA

Reconstruction of the Main, Middleborough, and Plymouth lines. Services included planning, design, and construction phase services for 15 commuter rail platform stations; 47 new and rehabilitated bridges; 62 miles of track; improvements to 18 roadway intersections; 44 grade crossings; environmental impact statements.



Frankford Reconstruction and Transportation Center, Philadelphia, PA

Design and construction management services for reconstruction of an elevated rail line and transportation center. Services included 11 station renovations and replacements; design provisions for ADA accessibility; construction plan development to maintain pedestrian and vehicular access; station lighting and security upgrades; community outreach program.



Blue Line Extension to Largo, Prince George's County, MD

Project designer for a joint venture constructor team, responsible for all civil, structural, and site design; facilities design; and systems design of this expanded transit system, including at-grade double tracking, underground/covered structures, cut-and-cover tunneling, and aerial structures for a 3.1-mile extension.



DART General Engineering Consultant, Dallas, TX

Part of a joint venture serving as General Engineering Consultant for Phase 2 of the \$2.3-billion light rail transit build-out. We are providing program and construction management and systemwide engineering design services, and will lead efforts to continue DART's successful rail station development. The 5-year contract supports DART's capital expansion program and doubles the size of the current light rail system services.



Dulles Corridor Metrorail Extension, Fairfax and Loudoun Counties, VA

Leading the program management team providing design oversight and construction of the 23.1-mile Dulles Corridor Metrorail extension in the rapidly growing Fairfax and Loudoun Counties for the Metropolitan Washington Airports Authority (MWAA). Our role encompasses several major categories of services: program management, stakeholder facilitation, environmental planning, design oversight, and construction oversight.

0712-STL-P0151 4 **JACOBS**





FasTracks, Denver, CO

Providing program management for the \$6.2-billion FasTracks program as an extension of Denver Regional Transportation District (RTD) staff to guide the program. FasTracks is a 12-year, comprehensive plan for high-quality transit service and facilities in the region. RTD will construct over 119 miles of new rail transit, 18 miles of bus rapid transit, and enhance the bus network to support investments in rail, serve suburb-to-suburb trips, and provide local and regional bus service.



New York MTA, New York, NY

Providing independent engineering consultant services to the New York Metropolitan Transportation Authority (MTA) for their \$17-billion, 5-year capital improvements program, including facility assessment and asset management, operations project oversight, quality assurance/quality control, strategic/long-range/policy planning, and transportation planning.



OCTA Program Management Consultant, Orange County, CA

Project management consultant for a 5-year rapid transit program. Functioned as an extension-of-staff and provided support for the High-Speed Rail Program, Anaheim to Ontario Maglev project, and OCTA's local transit connectors to Metrolink stations. The countywide BRT program includes management of design, construction, three BRT corridors totaling 70 miles, and implementation of a bus shuttle program in the Irvine Business Center with connections to John Wayne Airport.



Pasadena Gold Line, Los Angeles to Pasadena, CA

Supported the Metro Gold Line Foothills Extension Construction Authority in delivering a safe, economical, and environmentally friendly Metro Gold Line project from Los Angeles to Pasadena. The design-build delivery included 13 stations and 13.7 miles of rail line. Achievements included developing contracts that were fair and equitable; engaging multiple design-build contractors in an atmosphere of partnering; and developing a "project first" attitude among participants that resulted in no formal disputes.



T-REX Transportation Expansion, Denver, CO

Provided program and construction management for the multi-award-winning T-REX project. The project was a \$1.75-billion multimodal effort that included design and construction of 63 major structures. The T-REX project has been recognized as a streamlined approach to multimodal project delivery and interagency cooperation. Early in the T-REX project, the team worked to coordinate state and federal specifications into one set of project requirements.



NICTD Catenary/Signal Rehabilitation, Illinois and Indiana

Managed reconstruction of the existing signal systems into a new system including centralized train control, fiber optic communications, and substation supervisory control. Also involved managing construction of a new fixed tension overhead catenary system and provided complete construction management services to NICTD and acts as their agent on this 4-year contract.



CTA Red Line Reconstruction, Chicago, IL

Provided preconstruction and construction management activities for reconstruction of eight stations, interlockings, signal systems, communications systems and third rail to accommodate a 10-car operation. The project also includes construction of two new DC power substations and two overhead structures supporting bus turnaround operations. Our role included technical reviews of all designs, constructability reports, and staging and phasing. During construction, performed project management and resident engineering for field operations.



MTA Baltimore Light Rail Double Tracking, Baltimore, MD

Served as project designers and performed construction phase services for conversion of four single-track segments of the light rail system to a double-track configuration. The project included 4.5 miles of track construction, systems work, and eight interlocked control points.

0712-STL-P0151 5 **JACOB**